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EXAMINER

LAMB, CHRISTOPHER RAY

ART UNIT	PAPER NUMBER
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2627

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/531,014

Applicant(s)

TUKKER ET AL.

Examiner

Christopher R. Lamb

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-8 and 11-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-8 and 11-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 19th, 2007 has been entered.

Specification

2. The disclosure is objected to because of the following informalities: on page 3, line 30, to page 4, line 5, the specification refers to "two dimensional position sensing device 24." The drawings do not show any component labeled as "24."

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 11-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 11:

It recites the limitation "wherein said second portion of the redirecting structure and said reflective portion are formed as a single structural element." It is dependent on claim 16.

It seems apparent, especially from the further limitations of dependent claim 12, that Applicant is attempting here to claim the lens structure shown in Fig. 5, part D, and described on page 6, lines 1-5.

This part of the lens does meet the limitations required of the second portion of the redirecting structure: from claim 16, that it redirects "the reflected second part of the reflected radiation beam after reflection from the record carrier."

This part of the lens also reflects part of the incoming beam, as described in page 6, lines 1-5, of the specification.

However, "said reflective portion," as claimed in claim 16, is "for reflecting the reflected second part of the reflected radiation beam." This is the beam after it reflects from the disc.

The lens structure of Fig. 5, part D, does not reflect the reflected second part of the reflected radiation beam. It reflects part of the incoming beam. The only element in the specification that reflects part of the beam after it is reflected from the disc is the beam splitter 4 of Fig. 1.

Therefore the "said reflective portion" of this claim would appear not to be the same reflective portion recited earlier in claim 16. One appears to refer to Fig. 5, part D, while the other appears to refer to Fig. 1, part 4. Therefore Applicant has not particularly pointed out and distinctly claimed the subject matter regarded as the invention.

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Regarding claim 12:

It is dependent on claim 11.

Regarding claim 13:

It recites the limitation “wherein the detection system comprises a single position sensitive detector for detecting both the reflected second part and the reflected main beam part.”

In the specification, Applicant discloses a single position sensitive detector “to detect...both the redirected and reflected parts of the beam” (page 9, lines 1-5). The “redirected” part of the beam appears to correspond to the claim’s “reflected second part.” However, by reflected part, here the specification is referring to the part of the beam reflected by the redirecting structure before it reaches the disc. In the claim, “the reflected main beam part” is earlier defined in claim 16 as reflecting from the disc. Therefore it appears that “the reflected main beam part” of the claim is different than the “reflected main beam part” earlier recited in the claim. Therefore Applicant is not distinctly claiming the subject matter Applicant regards as the invention.

Regarding claim 14:

This claim has a problem similar to that of claim 12. It recites “wherein the reflective portion is selectively reflective in relation to one of the first and second wavelength.”

As defined in claim 16, the reflective portion reflects the beam after it reflects from the disc. In the specification, the selectively reflective portion reflects part of the incoming beam, as described in column 6, line 25 to column 7, line 10.

Therefore "the reflective portion" of this claim cannot be the same reflective portion defined in claim 16.

Regarding claim 15:

It is dependent on claim 14.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 16, 2-5, and 7/5 are rejected under 35 U.S.C. 102(e) as being anticipated by Sugaya et al. (US 6,487,163).

Regarding claim 16:

Sugaya discloses:

An optical scanning device for scanning an optical record carrier by means of a radiation beam (Fig. 17), said optical scanning device comprising:

an optical system for directing said radiation beam to an information layer of the optical record carrier (Fig. 17), said optical system comprising means for focusing at least a main part of said radiation beam to a spot on said information layer (column 16, lines 40-50), and a redirecting structure for redirecting a second part of said radiation beam other than said main part along a path to said information layer different from a

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path of said main part of said radiation beam (column 16, lines 45-55), said optical system further receiving and directing a reflected radiation beam, reflected from said information layer, inclusive of a reflected main part corresponding to said main part of said radiation beam and a reflected second part corresponding to said second part of said radiation beam (column 16, line 55 to column 17, line 5); and

a detection system including an information signal detector for receiving said reflected main part from said optical system for detecting an information signal therein (column 17, lines 5-30), and a position sensitive detector collocated with said information signal detector for receiving said reflected second part from said optical system (column 17, lines 5-30), said position sensitive detector detecting a position of the reflected second part of the reflected radiation beam (column 17, lines 5-30),

wherein the redirecting structure comprises a first portion for redirecting the second part of the radiation beam when traveling towards the record carrier (column 16, lines 40-67), and a second portion for redirecting the reflected second part of the reflected radiation beam after reflection from the record carrier (column 16, lines 40-67),

wherein the optical system comprises a reflective portion for reflecting the reflected second part of the reflected radiation beam such that the reflected second part follows a path which is different to a path which is followed by the reflected main beam part of the reflected radiation beam (Fig. 17: 209. It follows a different path because the beams end up on a separate portion of the detector 315),

and wherein the position sensitive detector detects a position of the reflected second part (column 17, lines 5-30).

Regarding claim 2:

In Sugaya said redirecting structure comprises a refractive redirecting portion (it is a prism: column 16, lines 40-50).

Regarding claim 3:

In Sugaya the redirecting structure comprises a substantially flat surface portion (apparent from Figs. 22A and 22B).

Regarding claim 4:

In Sugaya the redirecting structure is formed as part of an objective lens system in the optical system (column 16, lines 40-50).

Regarding claim 5:

In Sugaya the redirecting structure is formed on a surface of a lens element (apparent from Figs. 22A and 22B).

Regarding claim 7/5:

In Sugaya the redirecting structure comprises a surface portion which is inclined with respect to a surrounding lens surface of the lens element (apparent from Fig. 22A and 22B).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugaya.

Sugaya discloses an optical scanning device as discussed above.

Sugaya does not disclose wherein the redirecting structure covers less than 5% of a cross-sectional area of a radiation beam.

However, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to include wherein the redirecting structure covers less than 5% of a cross-sectional area of a radiation beam.

The motivation would have been: in the course of routine engineering optimization/experimentation to determine the necessary cross-sectional area. Moreover, absent a showing of criticality, i.e., unobvious or unexpected results, the relationships set forth in the claim are considered to be within the level of ordinary skill in the art.

Additionally, the law is replete with cases in which the mere difference between the claimed invention and the prior art is some range, variable or other dimensional limitation within the claims, patentability cannot be found.

It furthermore has been held in such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range(s); see *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Moreover, the instant disclosure does not set forth evidence ascribing unexpected results due to the claimed dimensions; see *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338 (Fed. Cir. 1984), which held that the dimensional limitations failed to point out a feature which performed and operated any differently from the prior art.

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9. Claims 6 and 7/6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugaya in view of Koike (US 5,216,649).

Regarding claim 6:

Sugaya discloses an optical scanning device as discussed in the rejection of claim 5 above.

Sugaya does not disclose "wherein the redirecting structure is a non-rotationally symmetric variation in a surface of the lens element."

Koike discloses a redirecting structure that is a non-rotationally symmetric variation in a surface of the lens element (Fig. 10; column 9, lines 1-35). This structure is used for the same purpose as Sugaya's structure: redirecting part of the beam for tilt detection.

It would have been obvious to one of ordinary skill in the art to include in Sugaya wherein the redirecting structure is a non-rotationally symmetric variation in a surface of the lens element, because the two types (symmetric and non-rotationally symmetric) are used in the same environment, for the same purpose, and achieve the same result.

Regarding claim 7/6:

In Sugaya in view of Koike the redirecting structure comprises a surface portion which is inclined with respect to a surrounding lens surface of the lens element (this is true in both the lens of Sugaya, as shown in Fig. 22A and 22B, and in the lens of Koike, as shown in Fig. 9).

Response to Arguments

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10. Applicant's arguments with respect to claims 2-8 and 11-16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Lamb whose telephone number is (571) 272-5264. The examiner can normally be reached on 9:00 AM to 6:30 PM Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CRL 6/28/07

/William R. Korzuch/

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